

MARLBORO TOWNSHIP WATER UTILITY DIVISION

2014 WATER QUALITY REPORT



This report contains important information about your drinking water. If you do not understand it, please have someone translate it for you.

The Township of Marlboro is pleased to present this summary of water quality delivered during 2014. Each year, every public community water system is required to provide its customers with a report on the quality of water delivered during the prior year. **BASED UPON ALL WATER QUALITY TESTING THAT WAS PERFORMED IN 2014, THE QUALITY OF DRINKING WATER**

SUPPLIED BY MARLBORO TOWNSHIP MET, OR WAS BETTER THAN, ALL APPLICABLE FEDERAL AND STATE STANDARDS.

Please be assured that the Township is dedicated to the proposition that all customers of the Water Utility are entitled to consume and enjoy their water supply with the utmost confidence and, in pursuit of that endeavor, all personnel and professionals associated with the Water Utility Division are committed to providing you with drinking water of the highest possible quality.



The Source of Your Water Supply

Marlboro Township supplies its customers with a combination of water from two different sources. A portion of the Township's water is purchased from Middlesex Water Company ("MWC"), a water purveyor with more than 100 years of water collection, treatment and distribution experience. MWC supplies the Marlboro Water System with surface water that is obtained from the Delaware and Raritan Canal, as supplemented by the Spruce Run and Round Valley Reservoirs, which is operated by the New Jersey Water Supply Authority. Water is withdrawn from the Canal at an intake and pumping station in New Brunswick and transported to MWC's plant in Edison for treatment. The treated water is then transmitted to Marlboro Township through MWC's South River Basin Pipeline System. The Township's second source of water comes from the Water System's own groundwater supplies. Groundwater is pumped from 700-foot deep wells, which are located in the Potomac-Raritan-Magothy Aquifer, to the Township's treatment plant on Harbor Road. After being treated by an Ion Exchange process, the water is distributed to customers through a vast network of underground water mains and service connections.

The New Jersey Department of Environmental Protection (NJDEP) has completed and issued the Source Water Assessment Report and Summary for public water systems, which is available at www.state.nj.us/dep/swap or by contacting the NJDEP, Bureau of Safe Drinking Water at (609) 292-5550.

A public water system's susceptibility rating [Low (L); Medium (M); or High (H)] is a combination of the following two factors:

- 1) How "sensitive" the water supply is to contamination. For example, a shallow well or surface water source, like a reservoir, would be more exposed to surface and above ground contamination than a very deep well.
- 2) How frequently a contaminant is used or exists near the source. This is known as "intensity of use." For example, the types of activities (such as industry or agriculture) surrounding the water source.

The ratings are based on the potential for a contaminant to be: (i) at or above 50% of the Drinking Water Standard or MCL (High); (ii) between 10% and 50% of the MCL (Medium); or (iii) or less than 10% of the MCL (Low).

If a system is rated highly susceptible for a contaminant category, it does not mean a customer is or will be consuming contaminated drinking water. The rating reflects the potential for contamination of source water, not the existence of contamination. Public water systems are required to monitor for regulated contaminants and to install treatment if any contaminants are detected at frequencies and concentrations above allowable levels. As a result of the assessments, NJDEP may customize (change existing) monitoring schedules based on the susceptibility rating.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infection. These individuals should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium are available from the Safe Drinking Water Hotline (800) 426-4791.

Susceptibility Ratings for the Marlboro Township Water System

The Marlboro Township Water System is a public community water system consisting of 4 wells. None of the wells are under the direct influence of surface water (GUDI). The Water System has no surface water intakes. The Water System has one (1) groundwater source and one (1) source of purchased surface water. The Water System's groundwater comes from the Potomac-Rarita-Magothy aquifer and treated surface water is purchased from Middlesex Water Company.

The assessment of the Marlboro Township Water System involved the following:

- Identifying the area (known as the source water assessment area) that supplies water to your public drinking water system;
- Inventorying any significant potential sources of contamination in the area; and
- Analyzing how susceptible the drinking water source is to the potential sources of contamination

The table below illustrates the susceptibility ratings for the contaminant categories for each source in the Water System. The table provides the number of wells and intakes that rated High (H), Medium (M) or Low (L) for each contaminant category. For susceptibility ratings of purchased water, please refer to the specific water system's source water assessment report.

SOURCE	CONTAMINANT CATEGORY															
	pathogens		nutrients		pesticides		volatile organic chemicals		inorganics		radionuclides		radon		disinfection by-product precursors	
Four (4) Wells	H	M	L	H	M	L	H	M	L	H	M	L	H	M	L	H
			4			4			4			4			4	

An Explanation of the Water Quality Data Table

The chart on the following page provides representative analytical results of water samples routinely collected through 2014 from your water system. Please note the following definitions:

Maximum Contaminant Level (MCL): The highest level of contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Maximum Residual Disinfectant Level (MRDL): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the use of disinfectants to control microbial contamination.

ND: None Detected

N/A: Not Applicable

NTU: Nephelometric Turbidity Units

pCi/l: Picocuries per liter

ppm: Parts per million (one penny in \$10,000.00)

ppb: Parts per billion (one penny in \$10,000,000.00)

2014 WATER QUALITY TEST RESULTS - PWSID # 1328002

About the Data: The table lists all of the drinking water contaminants for which testing was performed during the 2014 calendar year by Marlboro or Middlesex Water Company with respect to water in the Marlboro System. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in the table is associated with testing that was performed between January 1, 2014 and December 31, 2014. The State of New Jersey requires the monitoring of and for certain contaminants at a frequency of less than once a year because the concentration of those contaminants is not expected to vary significantly from year to year.

Monitoring Waivers: The Safe Drinking Water Act regulations allow monitoring waivers to reduce or eliminate the monitoring requirements for some compounds because previous testing results have been consistently below the MCL. The Water System received waivers for: Nitrites in August 1997; Asbestos in August 1994; and a waiver was also granted for Synthetic Organic Contaminants (SOCs). Testing for Lead and Copper is on a reduced three-year monitoring schedule because years of testing have demonstrated that the results are consistently below the EPA action levels [Although tri-annual testing was performed during 2013]. Testing for asbestos was performed in 2002 and 2011. The results from both of the tests were "ND" or Non-Detectable.

Contaminant	Violation Y/N	Marlboro Twp. Water Utility	Unit Measurement	MCLG	MCL	Major Sources in Drinking Water
MICROBIOLOGICAL CONTAMINANTS						
Total Coliform	N	365 Samples No Coliform	Absent (negative) or Present (positive)	0	No more than 5% of monthly samples should be positive	Naturally present in the environment.
Turbidity (1)	N	Low - 0.048 High - 0.216 Average - 0.075	NTU	0	No sample > 1.0 NTU 95% samples < 0.3 NTU TT	Soil runoff. Turbidity is a measure of cloudiness in the water. We monitor it because it is a good indicator of water quality. High turbidity can hinder the effectiveness of disinfectants.
INORGANIC CONTAMINANTS						
Barium	N	0.145	ppm	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits.
Fluoride	N	Less than 0.25	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories.
Copper (2)	N	0.239	ppm	1.3	AL = 1.3	Corrosion of household plumbing systems; erosion of natural deposits.
Lead (2)	N	0.00443	ppm	0	AL = 0.015	Corrosion of household plumbing systems; erosion of natural deposits.
Nitrate (as Nitrogen)	N	Less than 0.5	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Nickel (3)	N	Less than 0.595	ppb	No MCLG	No MCL	Nickel occurs naturally in soil, groundwater, surface water and is often used in electroplating, stainless steel and alloy products.
DISINFECTANTS AND DISINFECTION BY-PRODUCTS						
TTHM (total trihalomethanes) (4)	N	0.025-0.048	ppm	N/A	0.080	By-product of drinking water disinfection.
HAA5 (Haloacetic Acids) (4)	N	0.009-0.029	ppm	N/A	0.060	By-product of drinking water disinfection.
Chlorine	N	0.3 - 1.35	ppm	4 ppm MRDLG	4 ppm MRDL	Water additive to control microbes.
RADIOLOGICAL CONTAMINANTS						
Alpha Emitters (5)	N	3.80	pCi/L	0	15	Erosion of natural deposits.

1. Turbidity is a measure of the cloudiness of water and is a good indicator of the effectiveness of the filtration system.
2. Lead and Copper were tested in 2013, in accordance with permit requirements. The results indicate 90th percentile value.
3. There is no MCL or MCLG for Nickel.
4. Compliance is based on locational running annual average.
5. Based on testing by Middlesex Water Company.

As you can see by the tables, our system had no violations. We're proud that your drinking water meets or exceeds all Federal and State requirements. We have learned through our monitoring and testing that some constituents have been detected. The EPA has determined that your water IS SAFE at these levels.

Required Additional Health Information

In order to ensure that tap water is safe to drink, the EPA and NJDEP prescribe regulations that require water suppliers to monitor and treat for potentially harmful contaminants. These agencies set water quality standards, which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791.

The sources of drinking water (both tap and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may have been present in source water include:

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally occurring or resulting from urban storm runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, storm water runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organics, which are by-products of industrial processes and petroleum production and can also come from gas stations, urban storm water runoff and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities. Radon, which is a colorless, odorless, cancer-causing gas that occurs naturally in the environment. For more information go to <http://www.nj.gov/dep/rpp/radon/index.htm> or call 800-648-0394.
- Disinfection By-Product Precursors, which are formed when disinfectants (usually chlorine) used to kill pathogens react with dissolved organic material (for example, leaves) present in surface water.

Special Considerations Regarding Children, Pregnant Women, Nursing Mothers and Others

Children may receive a slightly higher amount of a contaminant present in the water than do adults, on a body weight basis, because they may drink a greater amount of water per pound of body weight than do adults. For this reason, reproductive or developmental effects are used for calculating a drinking water standard if these effects occur at lower levels than other health effects of concern. If there is insufficient toxicity information for a chemical (for example, lack of data on reproductive or developmental effects), an extra uncertainty factor may be incorporated into the calculation of the drinking water standard, thus making the standard more stringent, to account for additional uncertainties regarding these effects. In the cases of lead and nitrate, effects on infants and children are the health endpoints upon which the standards are based.

Special Notice Regarding Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your home plumbing. Marlboro Township Water Utility is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in your drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://epa.gov/safewater/lead>.

National Primary Drinking Water Regulation Compliance and Other Monitoring

Marlboro Township Water Utility Division is active in protecting the environment and community, and the health and safety of customers is our highest priority. The Township welcomes questions residents may have about the Water Utility Division and the quality of water. For more information, call Matt Baeder, Chief of Operations at (732) 591-1759 or Ray Bhatia, P.E. at (908) 907-8380. Water quality data for community systems, throughout the United States is available on the internet at www.waterdata.com.

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